

Abstract of the Disclosure

A dual-layer type perpendicular magnetic recording disk for use in a perpendicular magnetic recording system that uses a single pole recording head has a laminated underlayer that has at least two ferromagnetic films exchange-coupled across an antiferromagnetic coupling layer. The magnetic moments of the ferromagnetic layers in the laminated underlayer are oriented antiparallel. The laminated underlayer provides a soft magnetically permeable flux return path without undesirable domain walls and associated media noise, with controllable permeability and minimization of saturation of the upper ferromagnetic layers. In one embodiment the moments of the ferromagnetic layers in the underlayer are oriented generally radially on the disk. In another embodiment the moments are oriented generally circumferentially in the track direction on the disk, so that the beneficial effect of the soft magnetic underlayer occurs primarily only during the writing process.